

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/973,712

DATE: 10/19/2001
TIME: 11:10:13

Input Set : A:\ES.txt
Output Set: N:\CRF3\10192001\I973712.raw

3 <110> APPLICANT: BOMMARIUS, ANDREAS
4 DRAUZ, KARLHEINZ
5 VERSECK, STEFAN
6 KULA, MARIA-REGINA
8 <120> TITLE OF INVENTION: ACETYL AMINO ACID RACEMASE FROM AMYCOLATOPSIS ORIENTALIS FOR
RACEMIZING

9 CARBAMOYL AMINO ACIDS
11 <130> FILE REFERENCE: 214382US0X
C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/973,712
C--> 13 <141> CURRENT FILING DATE: 2001-10-11
13 <150> PRIOR APPLICATION NUMBER: DE 10050124.9
14 <151> PRIOR FILING DATE: 2000-10-11
16 <160> NUMBER OF SEQ ID NOS: 2
18 <170> SOFTWARE: PatentIn version 3.1
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 1107
22 <212> TYPE: DNA
23 <213> ORGANISM: Amycolatopsis orientalis
25 <220> FEATURE:
26 <221> NAME/KEY: CDS
27 <222> LOCATION: (1)..(1107)
28 <223> OTHER INFORMATION:

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33 Val Lys Leu Ser Gly Val Glu Leu Arg Arg Val Arg Met Pro Leu Val	
34 1 5 10 15	
36 qcc ccg ttc cgg acg tcg ttc ggg acg cag tcc gag cgg gaa ttg ctg	96
37 Ala Pro Phe Arg Thr Ser Phe Gly Thr Gln Ser Glu Arg Glu Leu Leu	
38 20 25 30	
40 ctg gtc cgc gcg gtg acc ccg gcg ggc gag ggc tgg ggc gaa tgt gtc	144
41 Leu Val Arg Ala Val Thr Pro Ala Gly Glu Gly Trp Gly Glu Cys Val	
42 35 40 45	
44 gcg atg gag gcg ccg ctc tac tcg gag tac aac gac gcc gac qaq	192
45 Ala Met Glu Ala Pro Leu Tyr Ser Ser Glu Tyr Asn Asp Ala Ala Glu	
46 50 55 60	
48 cac gtg ctg cgg aac cat ctg atc ccc gca ctg ctg gcg gac gac	240
49 His Val Leu Arg Asn His Leu Ile Pro Ala Leu Ala Ala Glu Asp	
50 65 70 75 80	
52 gtg acc gcg cac aag gtg acg ccg ttg ctg gcg aag ttc aag ggc cac	288
53 Val Thr Ala His Lys Val Thr Pro Leu Leu Ala Lys Phe Lys Gly His	
54 85 90 95	
56 cgg atg gcg aag ggc gcg ctg gag atg gcg gtc ctc gac gcc gaa ctc	336
57 Arg Met Ala Lys Gly Ala Leu Glu Met Ala Val Leu Asp Ala Glu Leu	
58 100 105 110	
60 cgc gcg cat gac cgg tcc ttc gcg gcc gag ctg ggg tcc act cgc gac	384
61 Arg Ala His Asp Arg Ser Phe Ala Ala Glu Leu Gly Ser Thr Arg Asp	
62 115 120 125	
64 tcc gtg gcc tgc ggg gtc tcc gtc ggg atc atg gac tcc atc ccg cac	432

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65	Ser	Val	Ala	Cys	Gly	Val	Ser	Val	Gly	Ile	Met	Asp	Ser	Ile	Pro	His		
66	130					135				140								
68	ctg	ctc	gac	gtc	gtc	ggc	ggc	tac	ctc	gac	gag	ggc	tac	gtc	cg	atc	480	
69	Leu	Leu	Asp	Val	Val	Gly	Gly	Tyr	Leu	Asp	Glu	Gly	Tyr	Val	Arg	Ile		
70	145					150				155				160				
72	aag	ctg	aag	atc	gag	ccc	ggc	tgg	gac	gtc	gag	ccg	gtc	cg	gag	gtg	528	
73	Lys	Leu	Lys	Ile	Glu	Pro	Gly	Trp	Asp	Val	Glu	Pro	Val	Arg	Gln	Val		
74						165				170			175					
76	cgt	gag	cgc	tcc	gtt	gac	gac	gtg	ctg	ctg	cag	gtc	gac	gcg	aac	acc	576	
77	Arg	Glu	Arg	Phe	Gly	Asp	Asp	Val	Leu	Leu	Gln	Val	Asp	Ala	Asn	Thr		
78						180				185			190					
80	gcg	tac	acg	ctg	ggc	gac	gcg	ccc	ctg	ctg	tcc	cg	ctc	gac	ccg	tcc	624	
81	Ala	Tyr	Thr	Leu	Gly	Asp	Ala	Pro	Leu	Leu	Ser	Arg	Leu	Asp	Pro	Phe		
82						195				200			205					
84	gac	ctg	ctg	atc	gag	cag	ccg	ctc	gaa	gaa	gag	gac	gtg	ctc	ggc		672	
85	Asp	Leu	Leu	Ile	Glu	Gln	Pro	Leu	Glu	Glu	Asp	Val	Leu	Gly				
86						210				215			220					
88	cac	gcc	gag	ctg	gcc	aag	cgg	atc	cg	acg	ccg	atc	tgc	ctc	gac	gag	720	
89	His	Ala	Glu	Leu	Ala	Lys	Arg	Ile	Arg	Thr	Pro	Ile	Cys	Leu	Asp	Glu		
90	225					230				235			240					
92	tgc	atc	gtc	tcg	gcc	aag	gcc	gcc	gac	gcg	atc	aag	ctc	ggc	gcc		768	
93	Ser	Ile	Val	Ser	Ala	Lys	Ala	Ala	Ala	Asp	Ala	Ile	Lys	Leu	Gly	Ala		
94						245				250			255					
96	tgc	cag	atc	gtc	aac	atc	aaa	ccg	ggc	cg	gtc	ggc	gga	tac	ctc	gaa	816	
97	Cys	Gln	Ile	Val	Asn	Ile	Lys	Pro	Gly	Arg	Val	Gly	Gly	Tyr	Leu	Glu		
98						260				265			270					
100	gcc	cgc	cg	gt	cac	gac	gtc	tgc	g	ca	cac	gg	atc	gcg	gt	tg	864	
101	Ala	Arg	Arg	Val	His	Asp	Val	Cys	Ala	Ala	His	Gly	Ile	Ala	Val	Trp		
102						275				280			285					
104	tgc	ggc	gg	at	gc	atc	gag	acc	gg	ctc	ggc	cg	gc	gc	atc	g	912	
105	Cys	Gly	Gly	Met	Ile	Glu	Thr	Gly	Leu	Gly	Arg	Ala	Ala	Asn	Val	Ala		
106						290				295			300					
108	ctg	gcc	tcg	ctg	ccc	ggc	tcc	ac	ctg	ccg	gg	gac	acc	tcg	gcg	tcc	960	
109	Leu	Ala	Ser	Leu	Pro	Gly	Phe	Thr	Leu	Pro	Gly	Asp	Thr	Ser	Ala	Ser		
110						305				310			315			320		
112	ggc	cgg	tcc	tat	cg	acc	gac	atc	acc	gag	ccg	tcc	gt	ctg	gac	ggc	1008	
113	Gly	Arg	Phe	Tyr	Arg	Thr	Asp	Ile	Thr	Glu	Pro	Phe	Val	Leu	Asp	Ala		
114						325				330			335					
116	ggg	cat	ctg	ccg	gt	ccg	acc	ggg	ccg	ggc	ctc	gg	gt	act	ccg	att	1056	
117	Gly	His	Leu	Pro	Val	Pro	Thr	Gly	Pro	Gly	Leu	Gly	Val	Thr	Pro	Ile		
118						340				345			350					
120	ccg	gat	tt	ctg	gac	gag	gtc	acc	acg	gag	aaa	gcg	tgg	atc	ggt	tcg	1104	
121	Pro	Asp	Leu	Leu	Asp	Glu	Val	Thr	Thr	Glu	Lys	Ala	Trp	Ile	Gly	Ser		
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129	<212>	TYPE:	PRT															
130	<213>	ORGANISM:	Amycolatopsis	orientalis														

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132 <400> SEQUENCE: 2
134 Val Lys Leu Ser Gly Val Glu Leu Arg Arg Val Arg Met Pro Leu Val
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138 Ala Pro Phe Arg Thr Ser Phe Gly Thr Gln Ser Glu Arg Glu Leu Leu
139 20 25 30
142 Leu Val Arg Ala Val Thr Pro Ala Gly Glu Gly Trp Gly Glu Cys Val
143 35 40 45
146 Ala Met Glu Ala Pro Leu Tyr Ser Ser Glu Tyr Asn Asp Ala Ala Glu
147 50 55 60
150 His Val Leu Arg Asn His Leu Ile Pro Ala Leu Leu Ala Ala Glu Asp
151 65 70 75 80
154 Val Thr Ala His Lys Val Thr Pro Leu Leu Ala Lys Phe Lys Gly His
155 85 90 95
158 Arg Met Ala Lys Gly Ala Leu Glu Met Ala Val Leu Asp Ala Glu Leu
159 100 105 110
162 Arg Ala His Asp Arg Ser Phe Ala Ala Glu Leu Gly Ser Thr Arg Asp
163 115 120 125
166 Ser Val Ala Cys Gly Val Ser Val Gly Ile Met Asp Ser Ile Pro His
167 130 135 140
170 Leu Leu Asp Val Val Gly Gly Tyr Leu Asp Glu Gly Tyr Val Arg Ile
171 145 150 155 160
174 Lys Leu Lys Ile Glu Pro Gly Trp Asp Val Glu Pro Val Arg Gln Val
175 165 170 175
178 Arg Glu Arg Phe Gly Asp Asp Val Leu Leu Gln Val Asp Ala Asn Thr
179 180 185 190
182 Ala Tyr Thr Leu Gly Asp Ala Pro Leu Leu Ser Arg Leu Asp Pro Phe
183 195 200 205
186 Asp Leu Leu Leu Ile Glu Gln Pro Leu Glu Glu Asp Val Leu Gly
187 210 215 220
190 His Ala Glu Leu Ala Lys Arg Ile Arg Thr Pro Ile Cys Leu Asp Glu
191 225 230 235 240
194 Ser Ile Val Ser Ala Lys Ala Ala Ala Asp Ala Ile Lys Leu Gly Ala
195 245 250 255
198 Cys Gln Ile Val Asn Ile Lys Pro Gly Arg Val Gly Gly Tyr Leu Glu
199 260 265 270
202 Ala Arg Arg Val His Asp Val Cys Ala Ala His Gly Ile Ala Val Trp
203 275 280 285
206 Cys Gly Gly Met Ile Glu Thr Gly Leu Gly Arg Ala Ala Asn Val Ala
207 290 295 300
210 Leu Ala Ser Leu Pro Gly Phe Thr Leu Pro Gly Asp Thr Ser Ala Ser
211 305 310 315 320
214 Gly Arg Phe Tyr Arg Thr Asp Ile Thr Glu Pro Phe Val Leu Asp Ala
215 325 330 335
218 Gly His Leu Pro Val Pro Thr Gly Pro Gly Leu Gly Val Thr Pro Ile
219 340 345 350
222 Pro Asp Leu Leu Asp Glu Val Thr Thr Glu Lys Ala Trp Ile Gly Ser
223 355 360 365

VERIFICATION SUMMARY

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L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date